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*Mr. Loveridge
from Fire Con. W.O.*

3 **PRINCIPLES OF ORGANIZING
FOR
FOREST FIRE SUPPRESSION**

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U.S. FOREST SERVICE,
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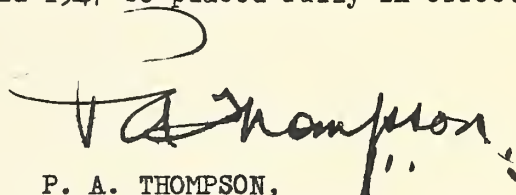
I. FOREWORD

These conclusions as to effective organization for large fire control resulted from an analysis of current organization practices for fire suppression conducted during the 1946 field season. During the 1947 season, the principles were tested on numerous fires to eliminate any "bugs." This revision incorporates the desirable modifications indicated by these tests.

The instructions that follow reflect the philosophies of many men well skilled in the art of fire control -- men who have been much perturbed by the dead-weight of overlapping authorities and complex administrative routine that over the years has crept into our organization practices. The recommended organization is not revolutionary -- instead it is a return to the basic principles from which we have, over the years, strayed too far.

There was generous and frank participation by forest officers at all administrative levels in Region 5 from the ranger district fire control assistant to the Regional Forester, supplemented by discussion with forest staff officers, supervisors and regional office personnel of Regions 1, 4, and 6, and with fire research men of the California, Pacific Northwest, and Northern Rocky Mountain Experiment Stations.

It is desired that this revised plan for Forest Fire Suppression Organization as developed in 1946 and 1947 be placed fully in effect.


P. A. THOMPSON,
Regional Forester

II. SUMMARY

Efficient organization for large fire suppression is a matter of concern to all forest officers. It is appreciated that existing organization structures and procedures in Region 5 are perhaps more complex and more in need of streamlining than in other regions. It is believed, however, that the principles set forth herein are universally applicable.

To clarify the text and to eliminate numerous explanations or reasons for certain statements, substantiating information and basic philosophies are limited to this section.

FIRST, what are the problems which require a reorientation of our concept of large fire organization?

1. Emphasis on more efficient and rapid suppression of large fires, coupled with the increasing development of numerous techniques and facilities, have increased the complexity of the suppression management job. Specialized and mechanized production facilities have been added to the time proven efficiency of the axe, shovel, mattock, and saw. Except on small fires the details of managing this complexity of facilities require the physical capabilities of more than the one or two individuals which was our normal staffing pattern during the days of strictly hand work. We must now closely parallel the military principles of hard-boiled "line and staff" functions.
2. With the objective of accomplishing all phases of the job simultaneously, individuals were generally assigned broad duties on a strictly territorial basis. As a result of sheer inability to give detailed attention simultaneously to several actions, indecision followed as to which of two or more important tasks should be delayed. For properly synchronized action, none should have been delayed. The fact must be fully recognized that two or more individuals performing separate jobs, in the same location and reporting to different supervisors (charged with missions by the top command), may be the most expeditious method of rapid job accomplishment.
3. With the idea of maintaining close touch with the entire operation, Fire Bosses have been prone to increase the number of individuals reporting directly to them (Division Bosses, Scouts, Camp Bosses, Transportation and Communication Assistants, etc.) to a number that prevented ample checking and integration of effort. This increased span of control and also served to slow down rather than expedite the compiling and dissemination of information and instructions. Even when the individuals were assigned to sub-unit chiefs, the span of control principle has often been violated under the guise of emergency conditions. More often than not such shortcutting practices result in confusion and consequent slowing down or failure of the total operation.

Corollary to this exaggerated span of control, there has been developed in Region 5 the philosophy of a Board of Strategy as an action planning aid to the Fire Boss. This philosophy is sound, so long as Board membership is restricted to those responsible for accumulation and analysis of basic plan data as opposed to those responsible for direction of line action. In practice this principle has not been adhered to; the entire span of control force has constituted the Board. As a result officers responsible for important directive line action (Sector Bosses, etc.) have been polishing a chair at a Board conference at critical times when their judgment and stabilizing influence were essential to successful action on the line. This condition must be corrected positively; those responsible for line action must stay on the line with the forces they are responsible for directing.

4. Job descriptions were formerly generalized with the thought in mind that this would permit a high degree of flexibility in the use of individual positions. The actual result was localized interpretation of the job description into a rigid pattern. This has resulted in harmonious accomplishment where men familiar with the local interpretation worked together, but has created huge voids in action and confusion when individuals are given emergency assignments outside their particular zone. The revised job descriptions (Appendix II) are specific to avoid possibility of these varying interpretations.
5. There has been a general degrading of line positions to the point where each position is doing a job generally one step below the original intent. To correct this, it is essential that greater use of the Straw Boss position be made. The Straw Boss is designed to keep men working and not to provide technical direction. The Crew Boss may be both a pusher and technical director but the real limitation as to his scope is the amount of line that he can supervise or the number of men he can furnish technical direction to by full employment of the Straw Boss position. By so elevating the Crew Boss to his true position, higher positions will automatically be freed for performance of their full assigned duties. Better suppression action and a reduction in number of skilled overhead positions will result.

SECOND, in any discussion of organization there inevitably arises the question - will the proposed pattern result in over-organization?

Over-organization may occur under any pattern of organization. The plan outlined specifies a uniform and clear-cut distribution of duties and definite channels of command which will permit unconfused performance of all the tasks leading to a fully integrated large fire suppression operation. Organization for a particular situation should conform to pattern required by the job to be done. All functions (shown in black on organization chart) must be performed on every fire. Positions (shown in red) are to be filled only when the volume of work reaches the point where additional assistance is needed. Duties of a vacant position must be absorbed by the next higher occupied position in that

channel of command. Over-organization, if it does occur, will reflect the tendencies of the individual Fire Boss or his lack of judgment as to requirements of the situation. Decision as to organizational refinement rests entirely with the individual Fire Boss and his staff.

THIRD, the principles on which the plan of organization is based provide, of course, for full elimination of existing organization insufficiencies. It must be fully recognized that.

1. There can be but one managerial head for a fire operation. He may have staff advisors but not an alternate.
2. Decision of the Fire Boss must be final and he must be sufficiently skilled in:
 - a. Fire behavior
 - b. Applicable control methods
 - c. Organization methods, and
 - d. Delegation of responsibility and authority to line and staff to permit acceptance of the full responsibility reposed in him.
3. To properly perform on a large fire, the Fire Boss must have competent assistants to absorb the total detailed phases of planning, supply and line action, thus freeing him for top flight study, planning and action, and these must be provided sufficiently soon to prevent a jam-up. On a small fire he may encompass all these jobs in his own person.
4. There must be full recognition and acceptance of the authority of the Fire Boss position on the part of subordinate personnel within the fire organization. The Fire Boss is boss until specifically relieved of this responsibility. Regular administrative officers who may technically outrank the incumbents of the Fire Boss position must avoid actions which will violate the integrity of this position.
5. If total functions of the given fire suppression job are more than one man can accomplish, then the job must be divided up sufficiently to permit complete accomplishment of each section thereof by a reasonably competent individual within a reasonable work period. Additional factors influencing the division of work load are location of work area and type of ability required.

The outlined plan of organization accomplishes this by dividing the job into three functional sections or units. They are:

- a. A line unit charged with full responsibility for executing the control and mop-up action on the fire line.

- b. A plans unit responsible for collecting and compiling all pertinent information regarding the fire and the resources available for control of the fire.
- c. A service unit responsible for procurement, maintenance, and physical distribution of control forces at the time and place planned on by the Fire Boss.

Decision as to which positions are required is to be based on the circumstances surrounding the particular fire suppression job.

III. ORGANIZATION FOR THE INITIAL STAGE OF THE LARGE FIRE

The organization during the initial stage of the fire is necessarily skeletonized due to lag in mobilization and uncertainty as to actual conditions in the fire area.

This fact requires that efforts of the top supervisory man in charge of the fire be focalized on the immediate problem to the almost complete exclusion of futures. The job of control planning and execution follow in such rapid sequence that these functions must be centered in a single individual. In other words, the man responsible for line activities must work entirely on the basis of personal knowledge of the situation, planning and executing as he goes.

This man, the Line Boss, during the early stage of the fire must function as an acting Fire Boss. He has definite "must" jobs to perform if he is to attain the desired degree of efficiency during this critical and trying period of the fire. They are:

1. Prior to leaving for the fire, he must obtain the best available information on:
 - a. History of the fire to date, fire behavior, and effect of control forces already on the fire.
 - b. Control forces being sent to fire, approximate time of arrival and exact destination to which they are being sent.
 - c. Ratings or skills of any overhead or specialists being sent to fire.
 - d. Present and forecasted weather conditions.
 - e. Fuel, topography, and culture in the fire area.
2. Enroute to fire he should, if at all possible, secure a vantage point picture of the fire and the surrounding country.
3. Almost simultaneously with vantage point observation, he must make a general calculation of probable perimeter by the end of the initial burning period and control forces required for control of the fire. This information should be relayed immediately to the dispatching agency.
4. Upon arrival at the fire he must:
 - a. Determine priority and sequence of attack.
 - b. Make definite arrangements for distribution and proper job assignments of incoming control forces.
 - c. Establish a reasonable method of communication between himself and the dispatching agency.
5. Upon completion of the foregoing duties, he must devote his entire energies to "on-the-line" direction of suppression efforts.

Full confidence must be placed in a supplementary organization which will determine second shift requirements, mobilize the necessary control forces and install service facilities as indicated by the particular situation. Line Boss has fulfilled his responsibility in this respect under point "3" above.

Just as soon as decision is reached that a fire will continue beyond the initial shift, a Fire Boss (permanent and authoritative head of the fire organization) should be assigned. When the initial Line Boss is a qualified Fire Boss, he will automatically take over the Fire Boss position. The Fire Boss' first responsibility in connection with the fire then is to determine organization requirements. Frequently conditions are such that he will be able, without additional staff help, to handle the Fire Boss job (strategy and broad action planning) and adequately supervise or perform the service and planning jobs. Where his estimate of the situation is such that additional assistance is, or may be, required, positive steps must be taken to secure for him the needed help. Equally important, he must avoid staffing beyond the practical requirements of the specific job at hand. It is essential to adequate control that at no time is the Fire Boss permitted to become so fatigued or so occupied with operational duties that he is rendered impotent as the directing influence of the total operation or is forced to interfere with the adequate performance of his Line Boss by assigning to him responsibilities that conflict with, or detract from, the Line Boss' job as director of suppression forces.

IV. ORGANIZATION FOR THE ADVANCED STAGE OF THE LARGE FIRE

In the advanced stages of the fire, and this might be within an hour or so after origin, the services of:

1. the Fire Boss.
2. the Service unit, and/or
3. the Plans unit

may be required. Which of these units are required on a particular fire and the staffing of individual units are determinations which must be based upon conditions on the fire.

Ordinarily it will be found that expansion of the organization must occur sufficiently soon that it may be functioning in time for second shift management of the fire. True, there will be instances where the character of the control job, the peculiar qualifications of an individual or extreme isolation of a portion of a fire may make it desirable to keep organization for the whole or for certain segments of the fire in the skeletonized form of the initial stage action. Where conditions justify such action, the official responsible for the fire, or the segment, must be specifically instructed as to the full scope of his duties and responsibilities and not be expected to assume them automatically.

To provide uniform understanding of the duties of each of the functional organization units, a general description of the responsibilities of these functional units follow. Specific job descriptions for each position within each unit are given in Appendix II as a guide to position assignment, for on-the-job training and for more explicit understanding of the functions of each position in the organizational structure. Graphically this is portrayed in the organization chart in Appendix I. IT MUST BE FULLY UNDERSTOOD, HERE, THAT THIS IS A PORTRAYAL OF THE ESSENTIAL FUNCTIONS TO BE PERFORMED ON ANY FIRE. HOW MANY INDIVIDUALS IT MAY TAKE TO ACCOMPLISH THEM DEPENDS SOLELY UPON THE NUMBER OF MEN, MACHINES, AND MULES REQUIRED FOR THE JOB. ON A SMALL FIRE THE ENTIRE JOB MAY BE ABSORBED BY THE FIRE BOSS.

THE FIRE BOSS

The position of Fire Boss carries full responsibility and authority for control of the fire in accordance with the objectives of existing policy.

He must perform or assign to responsible subordinates all operational jobs coincident to large fire suppression.

He must decide problems of strategy, general tactics, and organization.

He must establish a time schedule for completed performance by each unit chief, i.e., synchronize the functioning of separate units to insure sufficient time for each to adequately perform its share of the total operation.

He must consider currently and continuously the need for innovations, improvisations, alternate plans, sacrifices, and calculated risks which will contribute to most adequate control of the fire.

THE PLANS ORGANIZATION

The Plans Unit has the responsibility of:

1. Gathering all factual information concerning the fire, its probable behavior, the status of control, and the problems of control.
2. Gathering all information on resources available for control of the fire.
3. Compiling this information in the form of maps and vital statistics to permit rapid and precise decision by the Fire Boss on matters of strategy, general tactics, and general organization of "Line" and "Service" units.
4. Organization of currently available or expected control forces and preparation of specific, written instructions to line personnel down to Sector Boss level on the basis of the Fire Boss' decisions and instructions.

The chief of the planning unit, the Plans Chief, when such a unit is established reports directly to the Fire Boss and independently has the responsibility of organizing for and accomplishing all the duties called for above in accordance with usual time requirements or as specified by the Fire Boss.

The job of intelligence and planning is composed of distinct functional sub-units. They are:

1. Intelligence: The responsibility for the gathering of data on the fire (location, behavior and status of control)
2. Records: The responsibility for gathering and maintaining information concerning resources available for control of the fire and for performing the clerical duties of instruction preparation, maintenance of fire log, etc., and
3. Weather: The responsibility for acquisition and dissemination of adequate weather observations and forecasts.

On smaller fires all of the above functions may be handled by the Fire Boss and certainly by one person. As the size or complexity of the job increases to a justifying point, each of the sub-units mentioned above should be assigned to a single individual. Should a situation become so severe that any one of the functions exceeds the capabilities of a single individual, assistants should be assigned subordinate to and directly responsible to the sub-unit chief but not as an equal reporting directly to the Plans Chief.

Organization within the Plans Unit, if such unit is established, should adhere to the following pattern:

Plans Chief reporting to the Fire Boss is responsible for intelligence, statistical, and clerical functions for the fire.

Intelligence Officer reporting to Plans Chief, is responsible for collecting factual information concerning the fire and the fire area needed for planning purposes. This includes collecting information from "line" personnel as well as independent scouting action.

Records Officer reporting to Plans Chief is responsible for collecting all data concerning resources available for control of the fire and for performing all clerical duties in connection with management of the fire including timekeeping.

THE LINE ORGANIZATION

When a fire reaches the stage where a Line Boss is required, he and his assigned forces have but one responsibility. This is to direct line action to control of the fire in accordance with the strategic and broad tactical plan of the Fire Boss. He should be provided with a job assignment which specifies the general location, time of completion and, in general terms, the nature of the work to be accomplished. He should be provided with control forces (men, tools, specialized equipment and overhead in organized units) and adequate transportation, communication, and camp facilities within the limits of available resources and the demands of the situation. Being freed entirely from responsibility for planning future action, organization of next shift forces, and service of supply functions, except in case of specific assignment, the Line Boss and his subordinates are expected to devote their full time and energy to completing their assigned job of line construction, holding action and mop-up. This implies for the Line Boss, full time on the line, directing and coordinating the efforts of his organization. In turn Sector Bosses should devote their full time to the scope of their assigned unit of line unless given special assignments by the Line Boss. Inter-sector coordination is a specific responsibility of the Line Boss.

Detailed organization of the Line Unit should adhere to the following pattern:

Line Boss reporting to the Fire Boss or to the Division Fire Boss is responsible for suppression action on the entire fire or a division on the fire.

Sector Boss is responsible for specific location of control line, standard of construction or mop-up, and rate of accomplishment within his sector. Reports direct to Line Boss or Fire Boss depending on organization on the particular fire.

Sector Specialist is responsible for one or more specifically assigned functions such as line construction, machine work, backfiring, line location, or mop-up. He must plan detailed techniques to meet the situation with facilities assigned and direct activities in accordance with Sector Boss specifications and time schedules. Reports direct to Sector Boss. Sector Bosses may have more than one such assistant. The number depends upon the complexity of the job existing on the sector.

Crew Boss is responsible for adequate work production of his crew in accordance with his job instructions. Is responsible for the safety, welfare and timekeeping of his crew. Maintains them as a unit for the duration of the fire. On the line reports direct to Sector Boss or Sector Specialist, depending on the organization of the sector and, when in camp, to the designated officer of the camp.

Straw Boss is responsible to Crew Boss. Serves as working leader of three to five men. Main job is to keep men fully occupied on specific jobs as assigned by the Crew Boss.

THE SERVICE ORGANIZATION

The service organization is responsible for the functions of:

1. Camp management
2. Installation and operation of the communication system.
3. Maintenance and operation of transportation.
4. Procurement, distribution and maintenance of supplies, equipment, manpower, and overhead.

The chief of the Service Unit, Service Chief, when such a unit is established, is responsible for delivery of overhead, manpower, equipment, and facilities in operating condition to the location and at the time called for in the Fire Boss' plan for control of the fire. He must keep currently familiar with the requirements of the control plan and the availability of resources. He must be able to inform the Fire Boss how planned control requirements fit with available supplies or attainable time limits. Given the requirements in terms of labor, overhead, specialized equipment and communication requirements, he must independently determine attritional losses, supplementary requirements, transportation, camp service needs and the mobilization and distribution time lags and so arrange his time schedule, his organization and his supply to provide what is called for in the Fire Boss' control plan. Where demand exceeds supply he must advise the Fire Boss as to the assets that can be had within the prescribed time limits sufficiently soon to permit necessary adjustment in control plans. The organization chart and position job descriptions, in the appendix, adequately portray subordinate staffing of the Service Unit to meet all conditions.

Expansion of the service organization beyond the single base operation must, because of the demands on a single pool of resources, remain highly centralized. A single Service Chief and subordinate staff may be able to successfully handle more than one operation base. Ordinarily, however, it will be necessary to assign secondary or Assistant Service Chiefs to each outlying base of operation. In many cases, Assistant Service Chiefs will require only the assistance of a Camp Boss. There will be instances, of course, where a full complement of sub-unit assistants will be required (usually the case in the main base) and others where no subordinate supervisory staff will be necessary.

There are few prepared guide lines to aid the Service Chief in the performance of his duties. Organizational ability, personal knowledge of techniques involved, sources of supply, and capacity for a large amount of detail are prerequisites to assignment of an individual to this position.

Chief of Staff

It will be noted that no previous reference has been made to a "Chief of Staff." That occasional situations will arise when such a position is vitally essential is undeniable. The position should not be used indiscriminately, for to do so introduces an additional administrative strata through which all information and instructions must flow, with resultant slowing of action.

Proper placement of the "Chief of Staff" in the suppression organization is dependent upon a general understanding of the elements of the top level job.

Work at this level may properly be divided into two fields:

1. Administrative or what is to be done, and
2. Management or how it is to be carried out.

The administrative job in fire suppression at directive level would consist of:

1. Strategy determination.
2. Broad action plans, i.e., the basic scheme of operation.
3. General criteria of performance such as economic considerations, priority of control, sacrifices, general standards of performance and time limits for completion of major steps in the operation.

The management job would consist of:

1. Establishing the organizational framework.
2. Defining unit fields of operation, such as location of service bases, determination of sectors or divisions and specific scope responsibility for the Line Unit, the Service Unit, and the Plans Unit.
3. Delineating specific channels of responsibility and coordination with particular emphasis on those situations which vary from the ordinary.
4. Assignment of tactical procedures in broad terms to specific units of the line indicating the general sequence and timing of operations, including time of arrival of control forces on the line.

The total administrative-management phase of fire suppression normally constitutes the Fire Boss' job. When the job becomes too big or too complicated to be adequately accomplished by one man, supported by a Line Chief, a Service Chief, and a Plans Chief, it is necessary to employ the services of a Chief of Staff. The Chief of Staff's job is to handle the management portion of top level work.

He would report only to the Fire Boss, and all subordinate positions would report directly to him rather than to the Fire Boss.

V. ADJUSTING THE ORGANIZATION TO THE INDIVIDUAL FIRE

In the foregoing section "Organization for the Advanced Stage of the Large Fire" and in the "Individual Job Descriptions," appended, the functions of each unit of organization are described. Full knowledge of the duties of these individual units is the best assurance of being able to set up an adequate organization to meet a specific situation.

The next few pages illustrate several variations in organization to meet specific situations. These are indicative of the flexibility of the organization pattern outlined. Like the master organization chart contained in the appendix, these illustrations are to be used merely as guides. Individual positions are filled only as needed. It should be remembered also that organization structure does not jump from one stage to another. Organization for a particular fire is an evolutionary development. It starts with the Dispatcher and the initial attack force grows as the situation increases in size or complexity and decreases as control reaches the advanced stages of mop-up.

ORGANIZATION - LINE STAGE FIRE

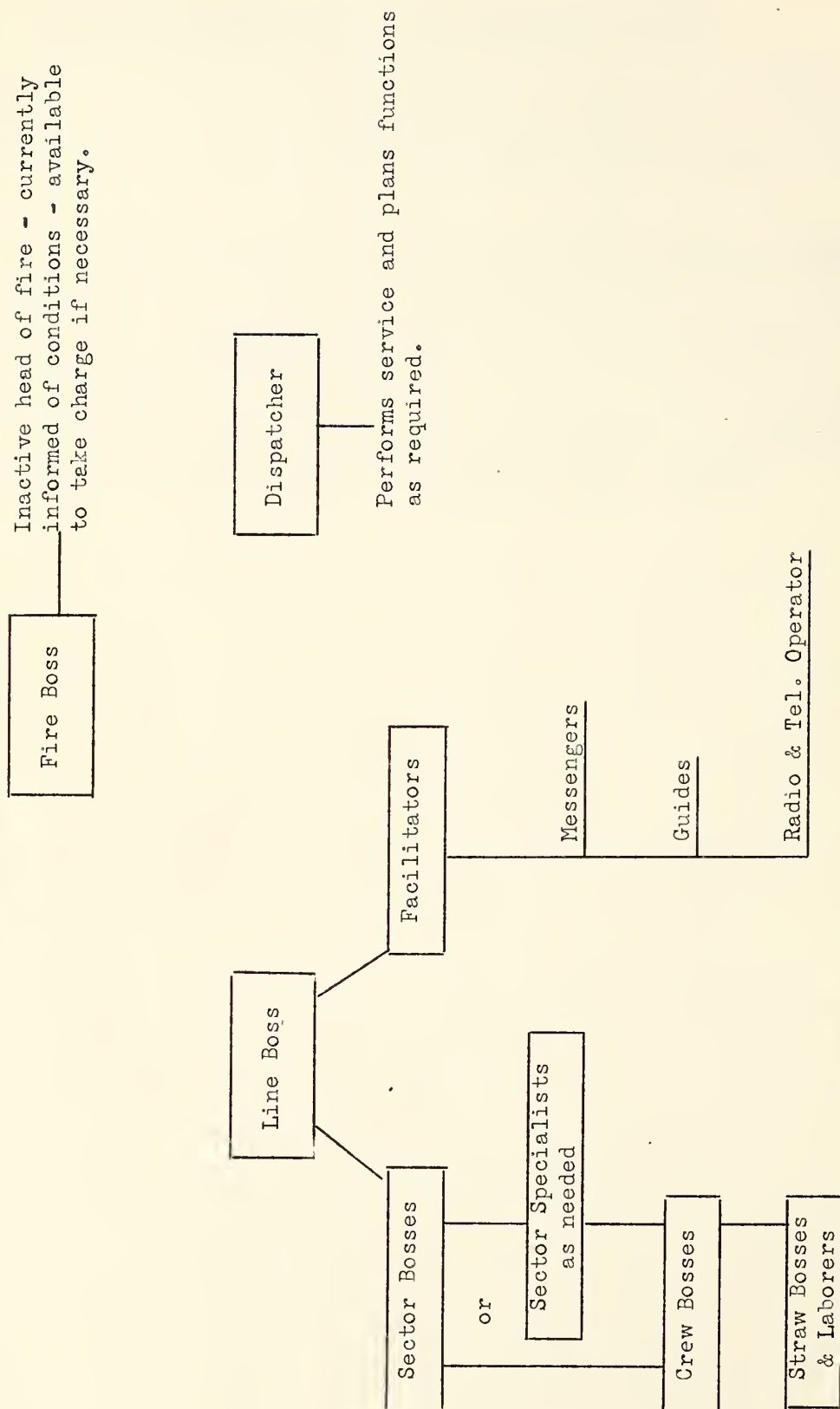


Figure 1

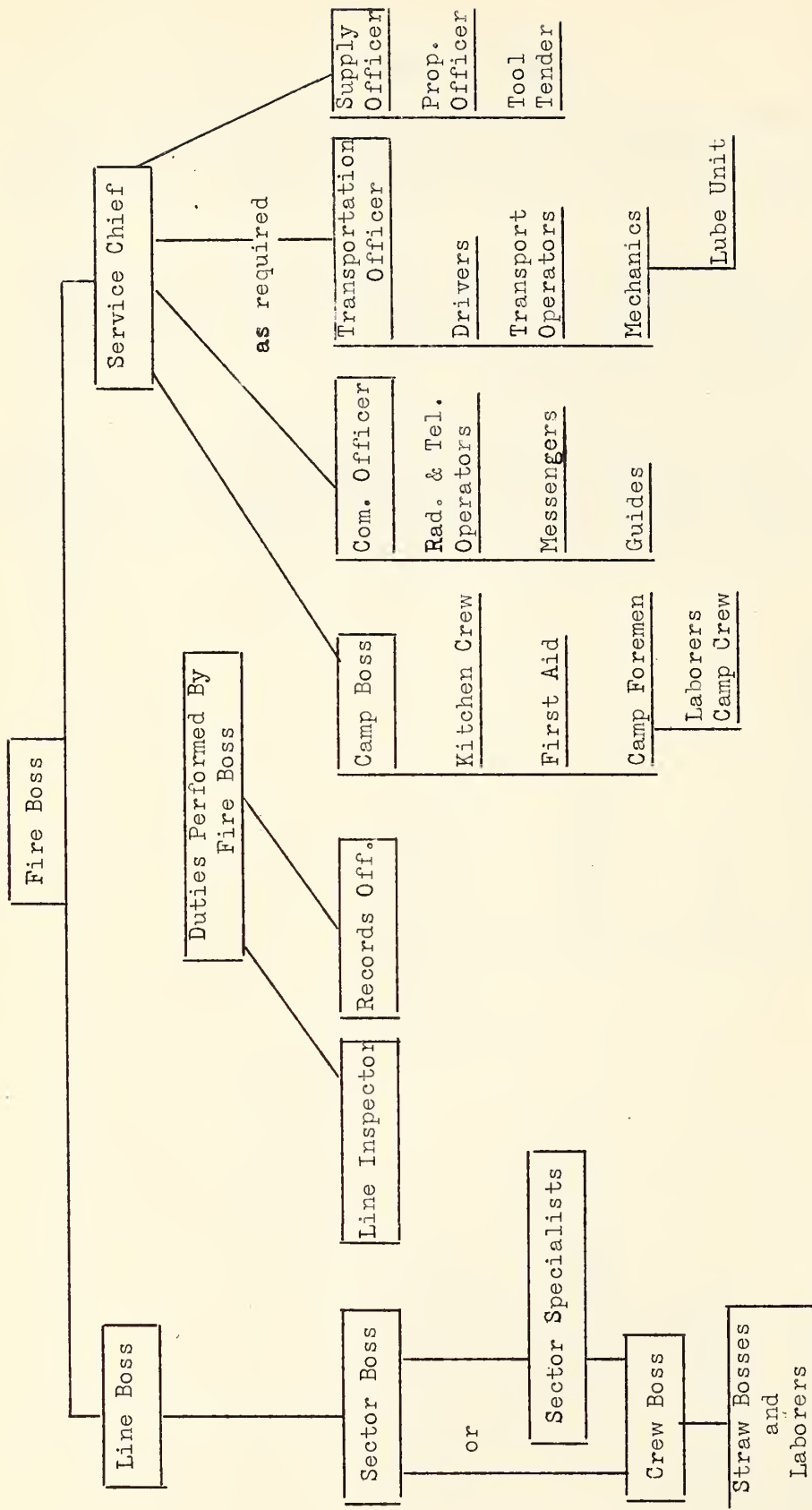
LINE STAGE FIRE

(1) Organization required for a fire which will be controlled and mopped up within initial shift. Fire Boss currently aware of the situation and prepared to go into action if Line Boss estimate proves too optimistic.

The fact that the control job is to be completed within the initial shift makes it unnecessary to establish camps or other facilities. Dispatcher should be equipped to plan for: procure and distribute needed facilities, food (usually lunches), etc., as indicated by the Line Boss' size-up of the situation.

The ability of the Line Boss to determine the potentialities of the fire and the effectiveness of control forces, his ability to adequately organize and direct suppression effort and the ability of the Dispatcher to procure and distribute the necessary supplementing facilities are the essentials of this type of fire.

ORGANIZATION LINE - SERVICE STAGE FIRE



Individual positions are filled only as required.

Figure 2

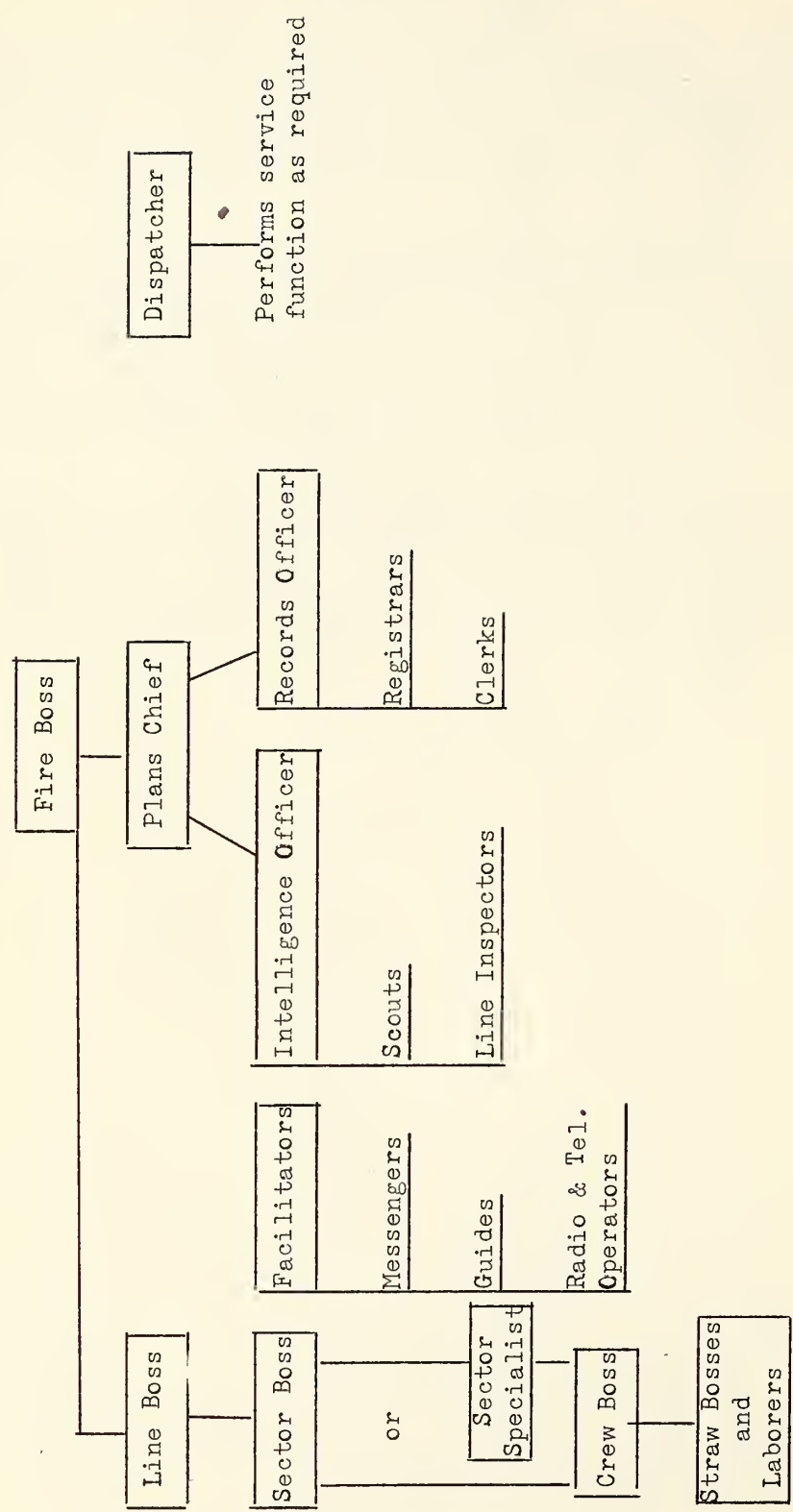
SERVICE STAGE FIRE

(2) Organization required where full knowledge exists as to required control measures. Inventory of job, principally through field contacts with Line Boss, necessary to instruction preparation and to planning distribution of control forces for each subsequent shift. Manning of fire on a large scale required for several shifts, hence need for Service Unit.

Fire Boss can personally encompass the duties of Plans Chief without jeopardizing his proper functioning as Fire Boss. This is a situation frequently encountered in the simpler project stage fire typical of east-side grass and sage brush fuel types. The smaller fire, 100-500 acres, in heavy fuels on which spread is definitely halted in the initial shift, but on which mop-up work is required for several shifts, is also representative of conditions requiring this type of organization.

This stage of organization and the Line-Plans stage which is discussed next are transition forms of organization. The problem has either peaked and on the decline or it is advancing into the full project stage. Fire Boss must be sensitive to which of these conditions exists and initiate action to prevent an undue delay in filling needed subordinate positions.

ORGANIZATION LINE - PLANS STAGE FIRE



Individual positions are filled only as required.

Figure 3

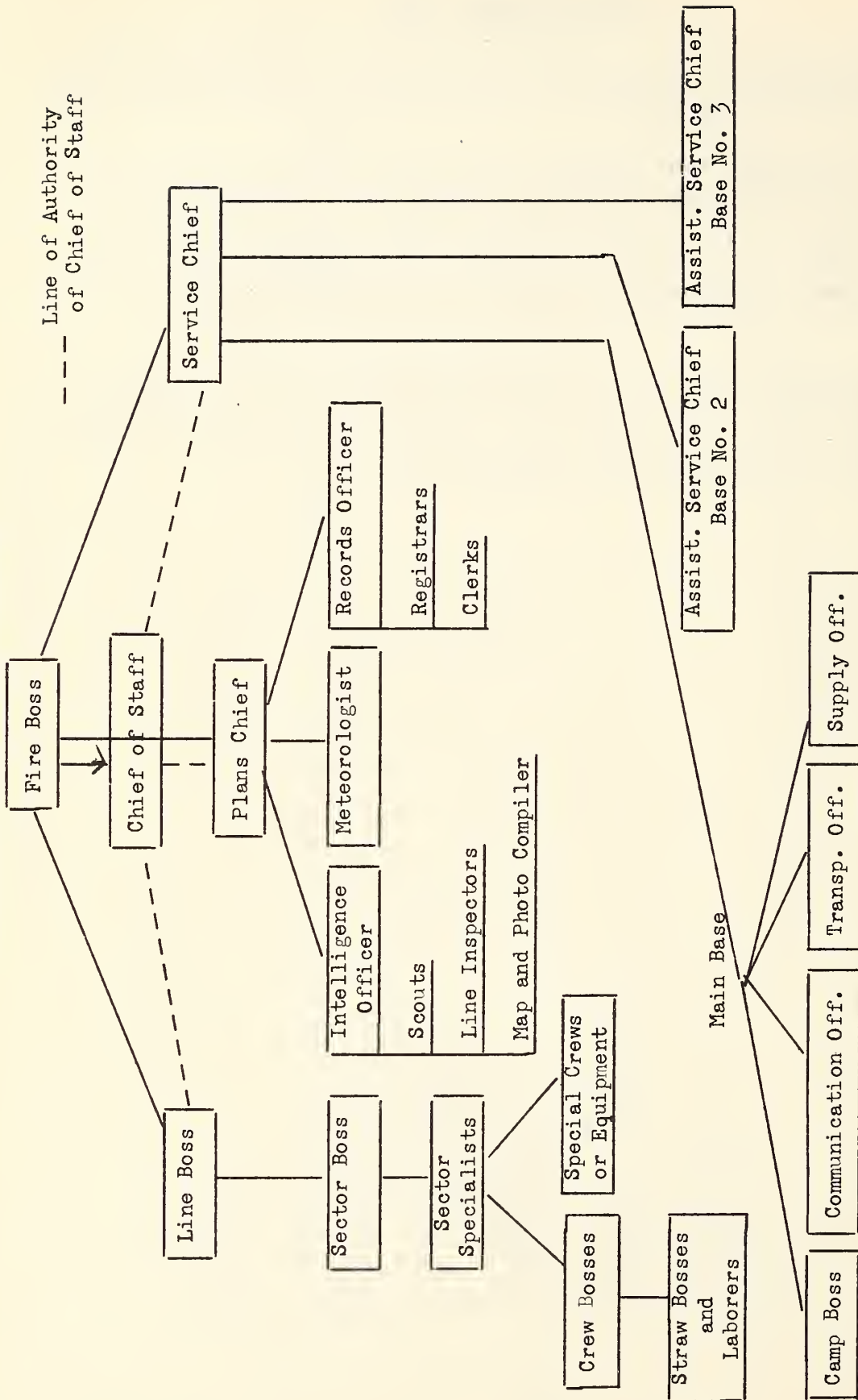
LINE-PLANS STAGE FIRE

(3) Organization required where doubt exists as to success of initial shift organization. Line Boss and crew proceed on assumption that their efforts will be successful.

Fire Boss and Plans Unit prepares fully for the situation which will develop if initial control action is unsuccessful. The Service Unit is alerted for immediate assignment in keeping with the anticipated plan for control of the fire. This type of organization might be desirable during the initial stages of all fires starting in high inflammability zones during normal or worse burning conditions. It is a decision to be made locally on the basis of fire potentials.

In this stage of the fire it is conceivable that the Fire Boss may be the only person on the job other than the Line Boss and crew. Action of the Fire Boss and Plans Unit is in the nature of an "ace-in-the-hole." Where doubt exists as to the success of initial shift efforts, it is inexpensive insurance against a campaign fire.

ORGANIZATION - PROJECT STAGE FIRE



Subordinate staffing as needed

Subordinate staffing as needed

Individual positions filled only as required.

Figure 4

PROJECT STAGE FIRE

(4) Organization required for the normal project fire which does not attain the size or complexity of the Division fire.

The entire fire, in this particular case, can be handled as a unit for all functions except those of the Service Unit. Establishment of secondary camps to keep camp setups small and close to work areas is frequently required. Territorial assistants to the Service Chief (Assistant Service Chiefs) should be assigned, as needed, to manage these outposts. If the number of bases exceeds two or three, an Assistant Service Chief should be assigned to manage the main base to allow the Service Chief time for planning and coordinating the specific services of each individual base.

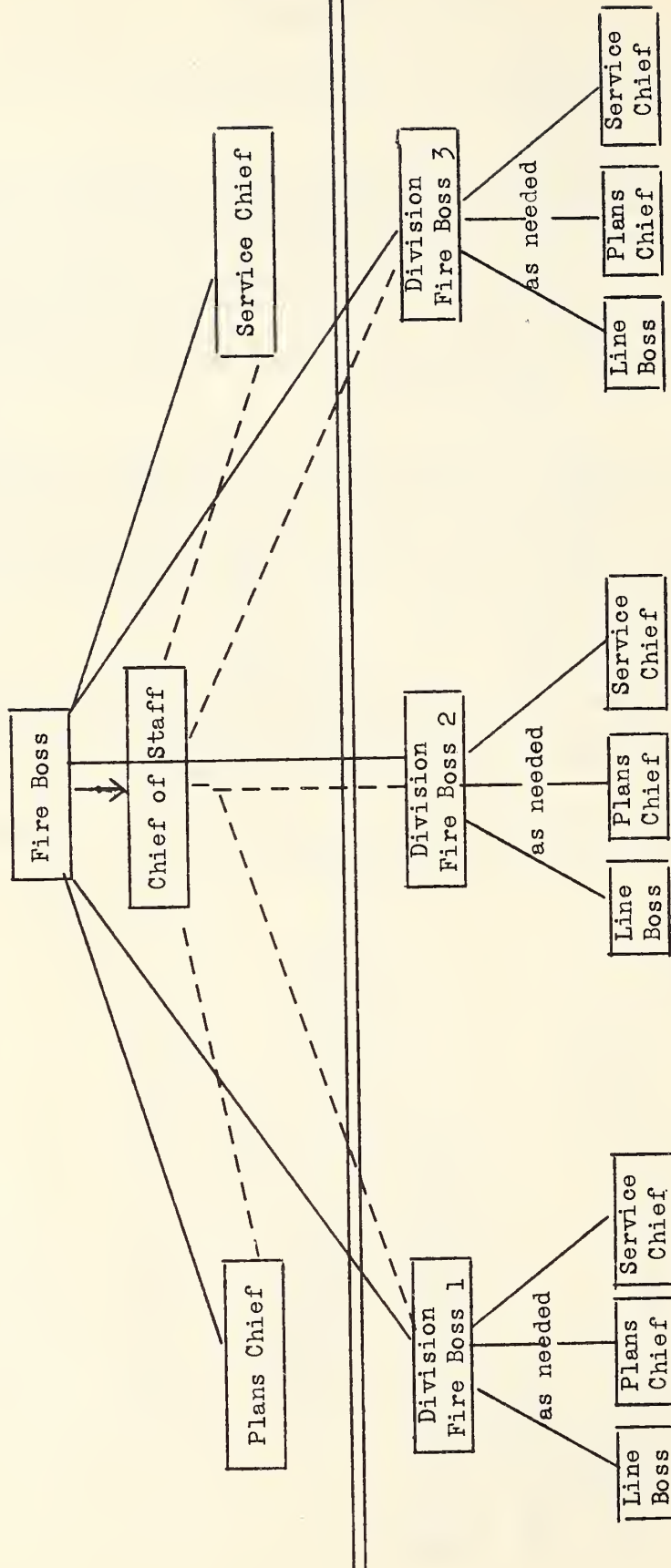
In this stage of fire, assignment of territorial lieutenants to the Line Boss is often necessary. In some cases the Line Boss can handle one unit, usually the most critical one, with an Assistant Line Boss in charge of the other. In other cases Assistant Line Bosses would be assigned to each territorial unit with the Line Boss providing only general supervision. Duties of the Assistant Line Boss are the same as for Line Boss within his designated territorial units.

It is in this stage of fire organization that a "Chief of Staff" may be necessary. Whether or not this position is required depends on the nature of the job to be done and the Fire Boss' opinion as to the value of the position in accomplishing the job at hand.

The broken lines on the chart indicate the line of authority of a Chief of Staff in the event one is employed.

ORGANIZATION - FULL DIVISION STAGE FIRE

General Fire Headquarters



Subordinate staffing
as required

----- Lines of Authority
----- of Chief of Staff

Figure 5

FULL DIVISION STAGE FIRE

(5) The foregoing illustrates conditions encountered in most of the fires that go into the large classification. Every effort should be made to keep organization structure under direct central management by territorial staffing of unit heads. There will be times when the situation becomes too large to permit planning and direction of suppression action centrally. Typical of this type of situation is a fire burning on two sides of a major drainage, in more than one drainage or more than one large fire burning at the same time in the same general area.

When this situation is encountered, divisions (formerly designated zones) should be established. Each such division is then handled as a separate fire with only general correlation, supply and broad direction being furnished by general fire headquarters. Division Fire Bosses are placed in charge of each division. Organization for each division is the same as for an individual fire with each position being filled as required.

The conditions during such fires are usually such that control resources are extremely limited. Division Fire Boss must: (1) be given an approximation of anticipated control forces, (2) prepare a concise plan of his proposed action with available resources, (3) review broad strategy with general fire headquarters only once each 24-hour period unless major changes in the fire situation occur within the 24-hour period.

General fire headquarters will:

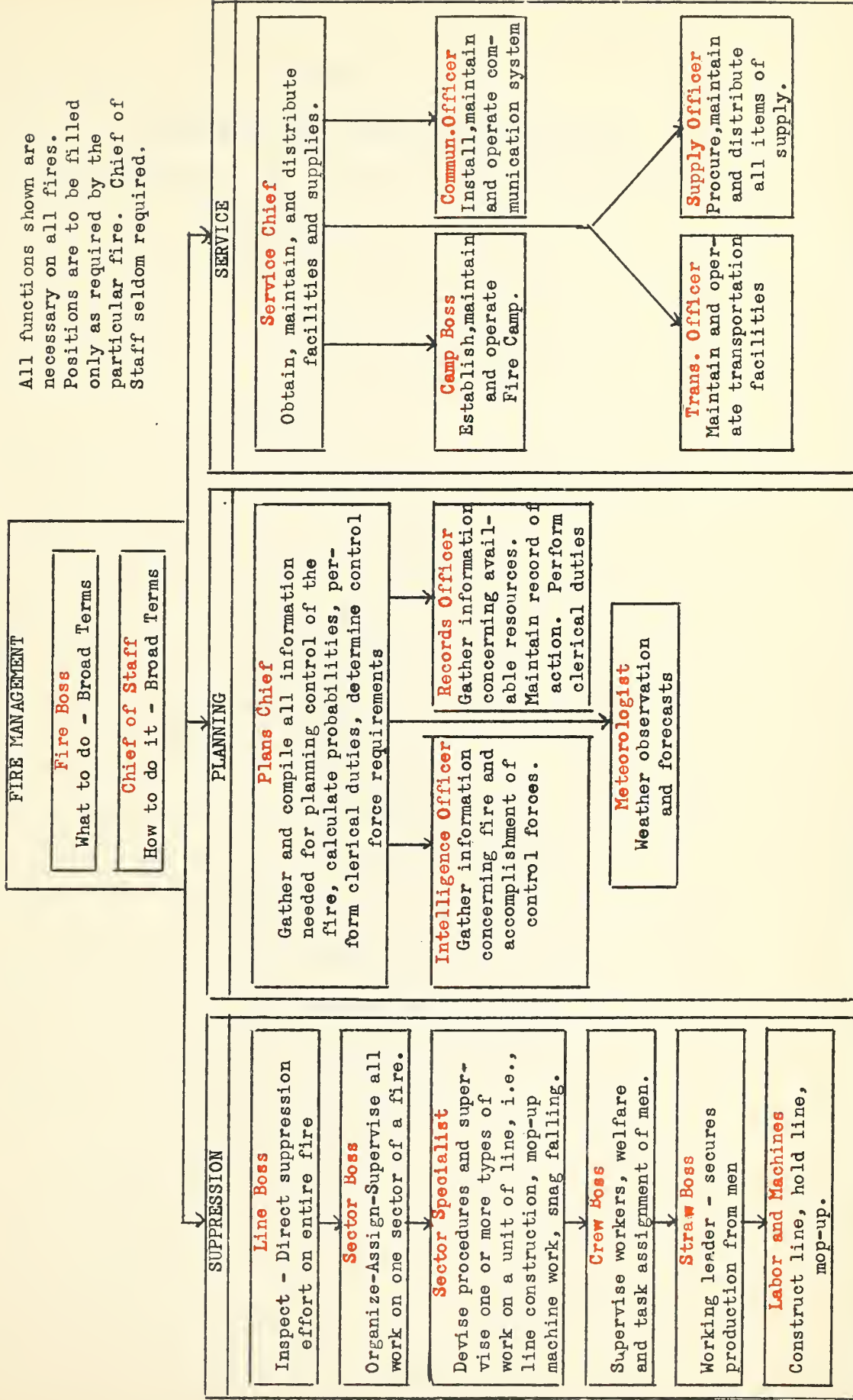
1. Establish and determine the specific territorial limits and the general accomplishment expected of each division.
2. Handle the total liaison work between divisions.
3. Keep posted on:
 - (a) Status of control
 - (b) Plan of control - strategic only for each division in the total operation.
4. Specifically approve the plan of control for each division each 24-hour period.
5. Distribute all control resources to individual divisions.
6. Maintain a reservoir of facilities to equip a complete division over and above those in operation insofar as this is possible.
7. Avoid all procedural and operational considerations of the individual division.

In this stage of organization, the Chief of Staff would function as field liaison officer between Division Fire Bosses and the Fire Boss. He would participate in scheduled planning meetings and make on-the-ground checks of Division Boss functioning. The Fire Boss would concern himself only with the major problems of control, depending upon a flow of vital information and personal aerial observation as a basis for decision. Where Chief of Staff is employed, lines of authority would follow the broken lines rather than the solid lines.

APPENDIX I

ORGANIZATION CHART LARGE FIRE SUPPRESSION

Functions and Their Relation to the Three Major Functions of Suppression, Planning and Service



APPENDIX II

JOB DESCRIPTIONS LARGE FIRE ORGANIZATION

Job descriptions are included for the following positions:

Management

1. Fire Boss
2. Chief of Staff
3. Division Fire Boss

Line Unit

4. Line Boss
5. Sector Boss
6. Sector Specialist
7. Crew Boss
8. Straw Boss

Plans Unit

9. Plans Chief
10. Records Officer
11. Intelligence Officer

Service Unit

12. Service Chief
13. Transportation Officer
14. Communication Officer
15. Supply Officer
16. Camp Boss

JOB DESCRIPTION - Fire Boss

Has full authority and responsibility for managing a fire control operation within the framework of legal statute and current policy statements.

Primary responsibility is to organize and direct the fire organization toward efficient and complete control of the fire.

Personal responsibilities of the Fire Boss are:

1. Decision as to strategy and general tactical plan for each shift.
2. Decision as to use of off-shift personnel to meet unanticipated situations.
3. Briefing and supervision of Line Boss, Plans Chief and Service Chief. (Sector Bosses may be briefed in part by Fire Boss under some conditions.)
4. Conduct strategy meetings.
5. Check on and initiate action to provide for the welfare and safety of all personnel.
6. Maintain high level of performance through the mop-up stage.
7. Take required action on all cases of personnel deficiency.

General responsibilities are:

1. Anticipate need for and assign work to functional assistants. Prior to their arrival, must perform the duties of all vacant positions in the direct channel of command.
2. Determine the need for and instruct special advisors or assistants not provided for in the skeleton organization pattern.
3. See that functional assistants understand and complete their work thoroughly and within time limits which permits control action in accordance with planned times.
4. Remain in communication, for emergency consultation, with functional assistant except for short periods. Designates an acting Fire Boss with full authority for decision when it is essential that he be out of communication.
5. By proper planning and delegation secures sufficient rest. Sees that subordinates (particularly Plans and Service Chiefs) secure all possible rest.
6. Generally frees himself of all functional duties.

JOB DESCRIPTION - Chief of Staff

This position is required on very few fires, when established it relieves the Fire Boss of the executive functions of fire suppression. Converts the decisions of the Fire Boss into action plans and sees that **they** are accomplished.

Establishes the organizational frame-work for control of the fire.

Delineates the territorial limits of sub-units on the fire, such as Divisions, Sector location of service bases etc.

Defines the scope of responsibility for the line, planning and service units.

Supervises the work of the line, planning and service units.

On Division stage fires serves as field coordinator between Divisions.

JOB DESCRIPTION - DIVISION FIRE BOSS (FORMERLY ZONE BOSS)

(This position to be used only on unusually large or complicated fires.)

Is fully responsible to the Fire Boss for planning control, servicing and suppression of a major unit of a large fire or one of several fires being handled as a unit. Will perform all the duties listed in the Fire Boss job description as they apply to his assigned unit of the fire.

Specifically he must:

- (1) Prepare a concise plan of control for his unit on the basis of conditions and available control forces.
- (2) Review general plans with Fire Boss at 24 hour intervals. Keeps Fire Boss informed of significant developments on his unit.
- (3) Upon approval of his plans, places into effect and carries them through to completion.

JOB DESCRIPTION - Line Boss

The position of Line Boss is designed to permit continuous "on the line" direction of suppression action by centering this responsibility in an individual position freed of responsibility for general management of the total operation. He is relieved of all responsibility for supply service and long range planning functions except as specified in this job description and his individual instructions from the Fire Boss. He works under the supervision of the Fire Boss. During the initial stage of the fire, is in full charge of field operations. Has full authority and responsibility for management of the fire prior to the designation of a Fire Boss.

Upon report of a fire, will secure the following information in general terms:

1. Probable spread of fire during first burning period.
2. Resources on fire, enroute to fire and yet to be dispatched.
3. Specific point and time of arrival of resources.
4. Communication channels available for immediate use and schedule of contacts.

He will then proceed to the fire usually by a route that will provide a vantage point size up of the fire and the adjacent country. Where feasible will make this observation from the air.

Next he will notify the dispatching agency as to his judgment of the adequacy of resources being assigned to the fire with an estimate of what the fire may do and what further resources are required for control.

Upon arrival at the fire he will:

1. Prepare a plan of control which will insure the most effective use of assigned resources.
2. Provide positive measures to insure proper disposition of resources upon their arrival at the fire.
3. Organize resources presently working on the fire in keeping with his plan of control.
4. Actively direct and coordinate the activities of fire suppression for the balance of the shift.
5. Report changes in conditions unless to do so will interfere with his line supervision duties.

6. Maintain agreed upon communication schedule (by assignments of an individual to this job if personal contact interferes with line supervision).
7. Organize the control forces into crews and sectors as required.
8. Prior to sector organization, will assume all the responsibility of the Sector Boss in addition to his own.

On fire on which a Fire Boss is designated, will perform the following functions:

1. All field organization will be in accordance with the plan of control as agreed upon by the Fire Boss.
2. Will in the absence of specific instructions to the contrary adhere to the following units of authority and responsibility and perform the duties as indicated by the following representative list;
 - a. Review the plan of control for the fire with the Fire Boss making such suggestions as he feels pertinent on the basis of personal knowledge of the fire and requesting such additional information as is necessary to adequate performance of his duties.
 - b. Issue instructions and make assignments to Sector Bosses for the ensuing shift. Check each to make sure all points are fully understood. Such instructions to include:
 - (1) Condition of fire behavior and fuel peculiar to locale.
 - (2)-a. Location of work including alternate plan.
b. Sector termini.
c. Sequence and timing of operation.
 - (3) Resources assigned and planned organization of the sector.
 - (4)-a. Transportation arrangements.
b. Communication schedules and channels
c. Camp and mess arrangements.
d. First aid facilities, special hazards and proposed escape routes.
 - (5) Whereabouts and means of contacting Line Boss during the shift.
 - c. Will keep currently informed of conditions and progress on all sectors personally inspecting the more important sectors at least once each shift. Inspection will cover the following points in Line Boss check list:

- (1) Is action being taken in accordance with time limits specified in control plan?
 - (2) Are proper techniques being employed?
 - (3) Are resources adequate (number, type and condition) for the assigned job?
 - (4) Do manpower and specialized equipment complement each other?
 - (5) Are sectors properly correlated?
 - (6) Are plans and services adequate?
 - (7) Are special problems that will carry over to next shift located, identified and recorded for transmission to plans group upon request and for review with relief shift?
 - (8) Are Crew Bosses receiving guidance and training from Sector Bosses?
 - (9) Are surplus resources made available for redistribution or release?
 - (10) Are inter-sector resources (such as bulldozers) being properly shared?
 - (11) Are strategic and general action plans being followed?
- d. Determines need for immediate redistribution of resources to meet unanticipated conditions and, if possible, calls to attention of Fire Boss. If need for redistribution is urgent and communication impossible, makes adjustment and notifies Fire Boss at earliest possible moment.
 - e. Determines the disposition of planned reserves, calling into action as needed without further clearance. Should, if possible, notify Fire Boss of action.
 - f. Will contact Sector Bosses sufficiently by radio, written message or personal interview to keep them assured as to the correctness of action being taken by them.

JOB DESCRIPTION - Sector Boss

Sets in motion and supervises the operations called for in the general action plan for his sector as outlined by Line Boss or Fire Boss. Attains the rates of progress and the quality of performance necessary for suppression of the fire. Determines specifically the time for starting and completing individual operations on his unit. Guides, coaches, and assists Crew Bosses or Sector Specialists as necessary to secure the quality and quantity of work required. Remains on his sector until specifically relieved.

Will assign specific functions or section of line to Crew Bosses or Sector Specialists. In making assignments will:

1. Describe or point out, where possible, the location of the work.
2. Define the standard of performance, i.e.:
 - a. Width of line or area to be worked.
 - b. Time to start the operation.
 - c. Time to complete the operation.
3. Define techniques to be employed where doubt exists as to ability of subordinate.
4. Explain the organization on the sector.
5. Describe special problems of the unit and define how they shall be handled.
6. Assist in organization of the crews to accomplish the job most expeditiously.
7. Specify arrangements for service facilities.
8. Specify arrangements for relief.
9. Specify safety precautions including line of retreat and treatment of injuries.
10. Specify location of and use of communication facilities.
11. Review off-shift responsibilities, time report, messing, sleeping, first aid, commissary. After assignment of personnel, will devote his energies to supervision of the Crew Bosses and their work. Inspection of work, training of Crew Bosses, assistance to Crew Bosses on unfamiliar activities and line location in advance of construction will be his major responsibilities.

Keeps Line Boss informed by radio or messenger, of progress on his Sector as per schedule. Anticipates problems requiring a change of the general action plan or assistance of the Line Boss in solving and discusses these with the Line Boss. Calls attention of Line Boss to surplus or shortage of resources as soon as these become evident.

May not make a shift in resources or change the strategy or general action plan of the Sector without approval of the Line Boss except:

- a. Where action of the fire forces abandonment of a portion of the line or requires unanticipated action such as control of a break-over or spot fire which cannot be handled as an individual problem and
- b. The Line Boss, Plans Chief or Fire Boss cannot be reached within allowable time limits for decision and
- c. That such action does not jeopardize the safety of personnel or invalidate the action of adjacent Sectors.

Will remain on his Sector until relieved by replacement or by specific instructions of the Line Boss. When relieved will account for all the resources assigned his Sector as to location and general condition prior to actual departure from the Sector.

JOB DESCRIPTION - Sector Specialist

Works under the supervision of the Sector Boss. His job is to handle completely an individual operation for a sector or portion of a sector. The services of a Sector Specialist are required when:

1. Highly specialized skill is needed for supervision or technical direction of an operation such as bulldozer line construction, snag falling (power or hand if large job), water use, backfiring.
2. When several distant operations are required simultaneously such as line construction, snag falling, burning out or backfiring, mop-up, spot fire search and suppression or difficult line location work.
3. If the specialized operation is of sufficient complexity or size to monopolize the time of the Sector Boss to the extent that supervision on the balance of the sector is slighted.

Sector Specialist may frequently be assigned to more than one Sector Boss during the course of a single shift. He will, however, be specifically transferred from one sector to another as specified by the Line Boss. Typical of this would be a Sector Specialist in charge of bulldozer work who, during the course of shift, was to construct line on two or more sectors. While working on Sector A, location and specification of the work would be provided by that Sector Boss. His release from Sector A to Sector B and transfer of supervision would be simultaneous and the determination of time for release would be by Sector Boss A and in accordance with Line Boss' instruction.

Specifically his duties are to:

1. Develop detailed procedures for securing maximum effectiveness from his assigned resources.
2. Provide technical direction for conduct of the operation.
3. Supervise and correlate the work of individual pieces of equipment and/or crews assigned for his operation.
4. Relieve the Sector Boss of all but general supervision and spot checking on the operation.
5. Provide for the safety and welfare of equipment and/or personnel assigned him from time of assignment to release.

JOB DESCRIPTION - Crew Boss

The Crew Boss works under the supervision of the Sector Boss or his assistant. He is responsible for the performance of his crew, their safety and their welfare for the duration of their assignment to him. Will retain the same crew for the duration of the fire; hence has responsibility for them both on the line and off the line. Will remain on line until instructed by his superior officer to leave.

"On-the-line" duties consist of:

1. Explaining at the beginning of each shift:
 - a. The nature of work to be accomplished.
 - b. Expected duration of the shift.
 - c. Chain of command -- who issues instruction.
2. Organizing the crew to efficiently accomplish specific tasks.
3. Locating and assigning individual tasks to Straw Bosses or crew members within the assigned section of line.
4. Explaining and/or demonstrating techniques of accomplishing the tasks safely and efficiently where crew members are inexperienced or unskilled, i.e., provide current on-the-job training to insure acceptable performance.
5. Stimulating Straw Bosses and crew members to attain quality and quantity accomplishment.
6. Providing first aid treatment for minor injuries.
7. Inspecting the area assigned frequently to assure accomplishment of required standards of performance.

"Off-the-line" duties consist of:

1. Retaining his crew as a unit, keeping them so mobilized as to answer to any request with his crew intact at any time.
2. Inspect physical condition, clothing and equipment of crew members prior to leaving and immediately after arrival at service base each shift. Take such action as indicated to maintain crew in useable condition.
3. Prepare and maintain time report in duplicate showing:

- a. Name of crew members.
 - b. Time slip number.
 - c. Origin of crew (lumber company, Sact. P.U., Deerhill road crew, etc.)
 - d. Hours on duty.
 - e. Pay classification. Turn in copy to Records Officer.
Copy at beginning of shift--original at end of shift.
4. Supervise crew while being transported between fire line and service base.
5. Learn (from Bulletin Board or Registrar) layout and routine of camp (feeding, sleeping, commissary, sanitation, etc.)
Instruct crew members and keep them under control.

JOB DESCRIPTION - STRAW BOSS

Works under supervision of Crew Boss as a working leader of a small group, usually not more than five men. Is responsible for keeping men fully employed on jobs assigned to his direction by Crew Boss. Will be given detailed instructions on what is to be done.

JOB DESCRIPTION - Plans Chief

Works under the supervision of the Fire Boss.

Is responsible for:

1. Collecting and compiling all data concerning the fire, calculating probabilities and control force requirements.
2. Collecting and compiling data on resources assigned to the fire.
3. On the basis of Fire Boss decisions and instructions preparing individual written instructions for line personnel to Sector Boss level.
4. Maintaining all records for the fire, both management and administrative. Such records to include the log of the fire, time records, data for preparation of 929, 10 o'clock report, special narrative report, summary of personnel and special equipment.
5. Assignment of personnel, equipment and tools to line units as specified by the Fire Boss or on his own initiative where instructions are lacking.

Specific duties of the position are:

1. Obtain and compile in useable form the following data concerning the fire area:
 - a. Location of fire perimeter
 - b. Behavior of fire on all parts
 - c. Topography
 - d. Soil formations
 - e. Cover (types and density)
 - f. Weather conditions, current and forecasted
 - g. Access routes and rate of travel
 - h. Status of control
 - i. Possible camp sites
2. Calculate probabilities of the fire.
3. Calculate control force requirements and determine type of action most applicable within the limits of available resources.
4. Prepare a statement of communication requirements for the line and planning units indicating frequency of contact and priority of installation.

5. Maintain a record of manpower, overhead and special equipment showing:
 - a. Number
 - b. Qualifications
 - c. Identification
 - d. Location (on-shift, off-shift and where located)
 - e. Time in a work status
6. Prepare written instructions to line personnel on basis of Fire Boss decisions and instructions. Instructions to include:
 - a. Section of line assigned to each unit.
 - b. Time allowed for completion of control.
 - c. General action plan.
 - d. Pertinent information concerning adjacent divisions.
 - e. Alternate plan of control and steps required to place in effect.
 - f. Location of camps, radios and other service facilities.
 - g. Map of fire or at least of assigned unit of fire.
 - h. Special explanation as needed for understanding of assignment.
7. Assist Fire Boss in briefing of line personnel.
8. Prepare or collect information for all administrative reports such as 929, special narrative, 10 o'clock.
9. Plan personnel needs of the Plans Unit. Organize them and supervise their work. Prepares specific written instruction for these men as necessary.

JOB DESCRIPTION - Records Officer

Is responsible to the Plans Chief for collecting and compiling all data on resources available for control of the fire, performing all clerical duties in connection with instruction preparation, etc., timekeeping and commissary issues and preparation of all administrative records in connection with control of the fire. Should use to the fullest extent possible the records of others but will initiate such action as is necessary to secure a complete set.

Specific duties are:

1. Registration of all incoming and outgoing personnel and specialized equipment.
2. Maintain time records of all personnel and special equipment (collect Crew Boss time reports and post data on time slips).
3. Acquaint all personnel as they arrive in camp of camp routines (reference to bulletin board) and layout of camp.
4. Prepare written instructions on the basis of rough draft or verbal instructions.
5. Prepare shift organization map showing disposition of resources. Cross-reference to job instructions and organization charts.
6. Collect and summarize records of communication officer, transportation officer and supply officer immediately prior to each planning session.
7. Prepares a chronology of fire action currently, appends copies of maps prepared by the intelligence officer showing perimeter of fire and status of control by 12-hour periods.
8. Prepares a "Summary of the Situation" similar to 10 o'clock report each 12-hour period.
9. Assembles all regular administrative reports concerning the fires.
10. Determine personnel and equipment needs for the records unit.
11. Organizes and supervises subordinate personnel.

JOB DESCRIPTION - Intelligence Officer

Is responsible to the Plans Chief for gathering all information concerning the fire area. Such information to cover all points on the Scout reminder list plus any specific information requested by the Plans Chief. Information to be in the form needed for intelligent analysis and within time limits established for the particular fire. Will determine the requirements of his organization including personnel, facilities, and service and provide the necessary supervision and guidance to insure adequate performance.

Representative Functions

1. Establish and designate key points on line and sign access routes into such points. Prepare map showing this data.
2. Determine method of scouting and/or line inspection (foot, horse, plane, car).
3. Place order for needed transportation for himself and subordinates.
4. Determines size of scouting and/or line inspection job and divides fire area into scouting units.
5. Assigns personnel to complete job in time allotted.
6. Prepares and issues instructions to Scouts and Line Inspectors. Instructions to include:
 - a. Area assigned.
 - b. Data to obtain. (See Scout Reminder List)
 - c. Method for recording.
 - d. Time and method of communicating data.
7. Secures and assigns necessary facilities for doing Scout or Line Inspector job (compass, abney, rule, protractor, map sheets, photos).
8. Receives all Scout and/or Line Inspector reports direct. Records data on master scout record. Such record to show location, character, time of observation and magnitude of findings. Will include current accomplishments and anticipated accomplishments by end of current shift.
9. On controlled lines, map of line showing location of special hazards.
10. Map of areas needing special spot fire attention.

11. Scouts personally where time and size of job permit and in any event sufficiently to permit intelligent analysis of scout reports.
12. Makes contact with line personnel and secure their opinion on:
 - a. Manpower requirements next shift.
 - b. Tools and special equipment next shift.
 - c. Problems needing special attention.
 - d. Best point for distribution of next shift and point for pickup of present shift.
13. Locates possible camp sites and prepares map of access route.
14. Locates and maps unburned islands.
15. Secures data on construction rates.
16. Prepares map of fire by 6-hour periods.
17. Secures data on values, houses, fences, etc., that may affect control plan.
18. Prepares photo maps of fire area showing perimeter and other pertinent information such as roads, streams, ridges, spot fires.

JOB DESCRIPTION - Service Chief

Works under the supervision of the Fire Boss.

Is responsible for furnishing all facilities and services called for in the plan of control for the fire. Such services and facilities to include Communication, Transportation, Supply and Camp Management in the proper amounts and at the proper time and place. This intends:

1. Personnel fed, rested and segregated by units for rapid dispatch.
2. Tools sharpened and segregated.
3. Transportation facilities serviced and manned by drivers.
4. Specialized equipment serviced and manned by operators.
5. Communication facilities installed, serviced and manned by operators.

Establishes, maintains and operates fire camps, assigning and supervising personnel needed to operate the camps. Will ordinarily secure information from plan of control on camp location, but in absence of such a plan, will independently plan the camp locations needed for proper service of line personnel. When independent plan is made, review by Fire Boss, Plans Chief or Line Boss will precede establishment of camps.

Furnishes men, tools and specialized equipment as ordered. Anticipates requirements in general terms. When given a manpower and overhead list, will independently determine rations, bedding, commissary, and transportation requirements and obtain or have such items immediately available. Is responsible for keeping such supplies available and ready for use as called for.

Obtains, services, and operates a transportation fleet to transport men, supplies and equipment. The size and character of the fleet is ordinarily determined by the Service Chief from an analysis of the control plan and anticipation of transportation requirements based on:

1. Transportation routes
2. Facilities available
3. Type of objects to be transported

Decides mode of transportation, schedule of trips, routing, etc.

Establishes, maintains and operates a communication system that will provide continuous service for:

1. The Plans agency and its field personnel.
2. The Line Boss and his Sector Bosses.
3. The Line Boss and the Fire Boss.

4. Service Chief and his outposts.
5. Fire headquarters and the behind the lines agency.
6. Special needs as determined by the Fire Boss and stated in the plan of control.

Will anticipate normal needs on the basis of the organization, personnel, and location of probable control line. Refinements will be based on approved control plans.

In addition to the stated requirements of manpower, tool, equipment and facilities, independently calculates the anticipated attritional losses of the particular fire and requisitions and distributes the items needed to maintain the quantity of control resources at the proper level.

Upon receipt of the planned line organization, organizes and dispatches crews and equipment in accordance with instructions. Is responsible for the line forces until delivered to the place and/or person called for in the instructions.

Specifically, he:

1. Determines the personnel and organization requirements of the service unit.
2. Determines time required for mobilization of resources (from determination of needs to available for dispatch from headquarters base or similar point) - "Mobilization Time Lag."
3. Determines time required for distribution of control resources from base to key points on line "Distribution Time Lag" and adjusts camp routine to absorb this time element.
4. Determines source, quantity and type of unobligated control resources available for assignment to the operation and keeps this information currently summarized.
5. Maintains contact with Assistant Service Chiefs and sees that they efficiently and completely serve line forces.
6. Determines through consultation with Dispatching Agency and the Fire Boss a priority of release for manpower and equipment. As surpluses become evident, organizes and dispatches to their destination.
7. Determines replacement needs of men, overhead, equipment and supplies and takes necessary steps to have available as needed.

8. For each basic item requested (50 men, 2 RD-7's, 5 saddle horses, etc.) determines and obtains the supplementary items necessary to make the item a sustained operating unit.
9. Supervises the work of Transportation Officer, Supply Officer, Communication Officer or Camp Officer. In their absence or prior to their arrival, must perform the duties of the position.
10. Sees that necessary departures from accepted safety practices in camp setups and transportation facilities are compensated for by improvisation and special cautioning of responsible personnel.
11. Sees that adequate first aid facilities are available in camps and on the line.

JOB DESCRIPTION - Transportation Officer

The Transportation Officer is responsible to the Service Chief for determination of transportation needs, including a reasonable reserve, operation, and maintenance of transportation facilities. Specific duties are:

1. On the basis of items to be transported within specific time limits, determines the type and amount of equipment needed.
2. Determines the number of personnel, drivers, mechanics, packers, etc., needed for operation and maintenance of transportation facilities.
3. Determines the supplies (gasoline, oil, repair parts, forage, saddles) needed to maintain transportation facilities in safe and efficient operating condition.
4. Handles the service and maintenance of mechanized equipment such as bulldozers, power saws, tank trucks, etc., the same as for transportation facilities.
5. Selects and posts, where necessary, the best transportation route to key points on fire. (Will check scouting information to determine how much independent work is necessary.)
6. Establishes traffic controls to prevent congestion or accident.
7. Prepares traffic schedules which permit most economical use of transportation equipment.
8. Places orders through Supply Chief.
9. Organizes and supervises subordinate personnel.
10. Maintains current summary of transportation equipment showing type and location.
11. Instructs drivers on special precautions necessary to safe transportation which are peculiar to the trip.

JOB DESCRIPTION - Communication Officer

The Communication Officer is responsible to the Service Chief for establishing, maintaining and operating the communication facilities. On the basis of statement of communication needs:

1. Determines equipment (type and amount) required for the job.
2. Determines personnel needs - technicians, operators, messengers, and guides.
3. Determines repair and replacement needs (crystals, tubes, telephone line, batteries, etc.)
4. Installs, maintains, and operates, where required, communication facilities.
5. Prepares schedules to meet requirements of the control plan within the limit of available resources.
6. Maintains record (map and chart) of location of equipment.
7. Independently works out and suggests improvements to communication system.
8. Organizes and supervises subordinate personnel.

JOB DESCRIPTION - Supply Officer

Is responsible to the Service Chief for obtaining and distributing all items called for in the plan for control of the fire and with the exception of those duties assigned to the Camp Boss, the Transportation Officer and the Communication Officer, of maintaining them in working condition.

Specific duties are:

1. Keeps current summary of the location of all items assigned to the fire.
2. Checks all orders for completeness; determines need for supplementary items.
3. Places all orders with supplying agency and/or procures locally in accordance with established procedures.
4. Establishes time limits and schedules for placing of orders for the various classes of items used and notifies persons responsible for originating orders.
5. Determines obtainability of items which may be needed in control of the fire.
6. Maintains tools and equipment and assembles by logical line unit for issue each shift. Establishes and maintains a system of accountability.
7. Determines commissary (tobacco, socks, etc.) needs, procures and arranges for issuance by the Records Officer or his timekeeper.
8. Determines the replacement rate for all items except communication and transportation, and after approval of Service Chief, secures such replacement.
9. Organizes and supervises subordinate personnel.

JOB DESCRIPTION - Camp Boss

Is responsible to the Service Chief for the establishment and operation of a base of operation. Is furnished with the location, general requirement and time schedule of the particular base.

Specific duties are:

1. Plans the detailed layout and sets up the base.
2. Organizes and supervises subordinate personnel.
3. Specifically designates and makes assignments to sleeping areas. Sleeping areas to provide for proper segregation of personnel, quiet, and for day sleepers the maximum amount of shade.
4. Sees that men are provided with proper sanitary facilities within the limits of available resources.
5. Provides for a safe water supply.
6. Organizes and schedules the feeding of personnel to meet the requirements of the control plan.
7. Establishes an assembly area and provides warming fires, bulletin board and similar facilities as needed.
8. Establishes and operates a first aid station for treatment of minor injuries. Arranges for treatment of more serious cases by a regular physician preparing necessary forms, etc.
9. Prepares instructions for Crew Bosses governing their responsibilities, times schedules and camp routine while in camp. Issues to each Crew Boss and posts on bulletin board.
10. Determines supply and personnel requirements for the camp management unit.
11. Organizes and mobilizes personnel for assignment in accordance with the plans for the shift. Actual dispatch of crews will be done by Service Chief.

